USDA, National Agricultural Statistics Service

Indiana Crop & Weather Report

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CROP REPORT FOR WEEK ENDING AUGUST 1

AGRICULTURAL SUMMARY

Temperatures and humidity remained high throughout most of the week, although many parts of the state experienced some relief due to scattered rain showers, according to the Indiana Field Office of USDA's National Agricultural Statistics Service. Nearly all of the corn across the state has now tasseled, and a good portion of the crop has moved into the dough stage. Some disease problems are beginning to appear in a few scattered soybean fields. The second cutting of alfalfa hay is nearing completion, with some farmers beginning the third cutting. Fruit and vegetable crops are reported to be in mostly good condition.

FIELD CROPS REPORT

There were 5.6 **days suitable for field work.** Ninety-six percent of the **corn** crop has **silked** compared with 73 percent last year and 87 percent for the 5-year average. Thirty-eight percent of the corn is in **dough** compared with 8 percent last year and 22 percent for the 5-year average. Four percent of the corn is in **dent** stage compared to 0 for both last year and the 5-year average. Corn **condition** is rated 63 percent good to excellent compared with 66 percent last year at this time.

Eighty-seven percent of the intended **soybean** acreage is **blooming** compared with 65 percent last year and 78 percent for the 5-year average. Fifty-nine percent of the soybean acreage is **setting pods** compared with 17 percent last year and 35 percent for the 5-year average. Soybean **condition** is rated 64 percent good to excellent compared with 66 percent last year.

The **second cutting** of **alfalfa hay** is 94 percent complete compared with 88 percent last year and 93 percent for the 5-year average. The **third cutting** of alfalfa hay is underway with 15 percent completed.

Major activities during the week included: cutting and baling hay, scouting fields for insects and diseases, monitoring irrigation systems, cleaning out grain bins, attending county fairs, mowing roadsides and ditches and taking care of livestock.

LIVESTOCK, PASTURE AND RANGE REPORT

Pasture condition is rated 65 percent good to excellent compared with 68 percent last year. Pastures look very good for this time of year. The high temperatures and humidity continued to place stress on livestock.

CROP PROGRESS

Crop	This Week	Last Week	Last Year	5-Year Avg.
	Percent			
Corn Silked (Tasseled)	96	91	73	87
Corn in Dough	38	14	8	22
Corn in Dent	4	NA	0	0
Soybeans Blooming	87	79	65	78
Soybeans Setting Pods	59	42	17	35
Alfalfa, Second Cutting	94	84	88	93

CROP CONDITION

Crop	Very Poor	Poor	Fair	Good	Excel-lent
			Percent		
Corn	3	9	25	46	17
Soybean	3	8	25	47	17
Pasture	2	7	26	50	15

SOIL MOISTURE & DAYS SUITABLE FOR FIELDWORK

Soil Moisture	This Week	Last Week	Last Year
		Percent	
Topsoil			
Very Short	2	2	2
Short	22	18	18
Adequate	71	72	63
Surplus	5	8	17
Subsoil			
Very Short	1	1	2
Short	20	19	22
Adequate	74	73	62
Surplus	5	7	14
Days Suitable	5.6	4.8	4.7

CONTACT INFORMATION

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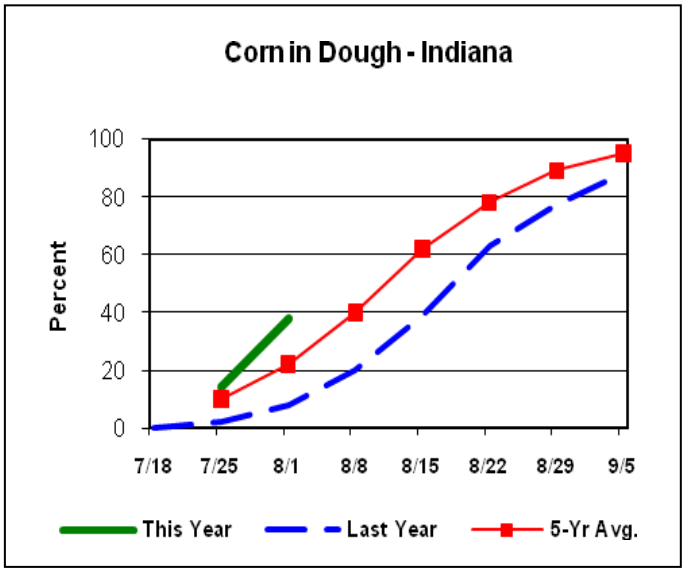
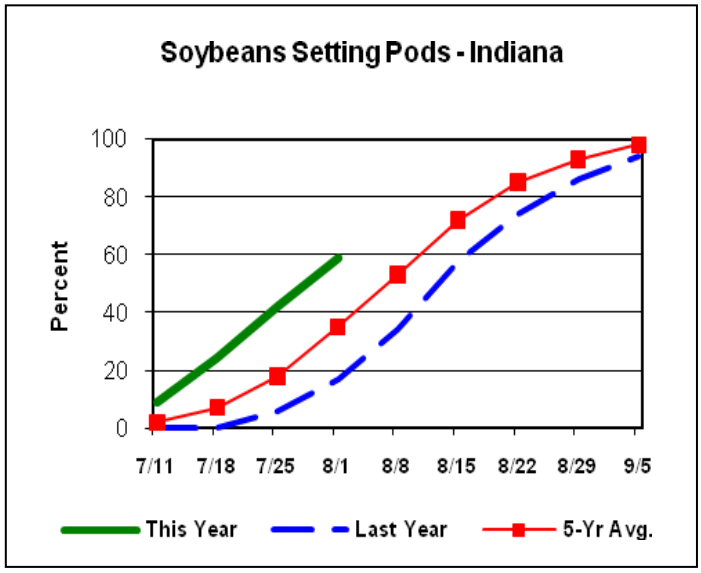
Crop Progress





Other Agricultural Comments And News

"Bubble Kernel" in Corn

Written by Emerson Nafziger, University of Illinois. Article appears in The Bulletin, Issue No. 16, Article 8/July 23, 2010.

Several years ago we had reports of an unusual phenomenon in which corn kernels seem to start to develop after pollination but are empty of content, containing only clear liquid with perhaps a small amount of white material--probably starch--that may later turn yellow. The liquid in these "bubbles" will eventually dry up, leaving what are essentially seedcoats without an embryo or endosperm. These may flatten as kernels on both sides press in during grainfill, if there are only a few, scattered "bubble kernels" on an ear.

I just received a report of this showing up again in 2010, with the photo here sent by Mike Vose at the Orr Research Center in western Illinois. Mike learned, after an initial period of head-scratching, that the producer in this case had sprayed glyphosate into the first few rows in the field from the side, when the corn and weeds were both tall-well off label. Those rows are the only ones showing this symptom.

While this report decreases our concern that this might be a widespread phenomenon without a good explanation, we also know that a lot of glyphosate was sprayed late this year. Much of this was off-label in terms of crop size. It appears likely that conditions after application this year might have favored the development of this effect.

Ear showing symptoms of the "bubble kernel" phenomenon, in this case the result of late glyphosate spraying. (Photo courtesy of Mike Vose, University of Illinois Orr Research Center.)

At this point we'd like to bring this to everyone's attention and to suggest that fields with late glyphosate applications be checked. It would also be interesting to know if any of this phenomenon is showing up without late glyphosate application. We didn't have much stress during pollination and have not had many reports of silk feeding. But we also don't know much about this phenomenon, so now that we know it has developed in 2010 we want to watch for it. It will appear in fields where plants look normal (other than large, hopefully dead, weeds), at least until late in grainfilling, when plants may show purpling. It's not a very pleasant surprise to find it with the combine.

Weather Information Table

Week Ending Sunday, August 1, 2010

Station	Past Week Weather Summary Data							Accumulation				
								April 1, 2010 through August 1, 2010				
	Air Temperature				Precip.		Avg 4 in Soil Temp	Precipitation			GDD Base 50°F	
	Hi	Lo	Avg	DFN	Total	Days		Total	DFN	Days	Total	DFN
Northwest (1)												
Chalmers_5W	92	60	73	-1	1.02	2		25.24	+9.91	54	2075	+170
Francesville	91	62	73	+1	0.68	2		20.93	+5.56	53	2036	+287
Valparaiso_AP_I	91	58	72	-1	1.02	3		20.41	+4.25	53	2071	+355
Wanatah	91	57	73	+1	0.98	3	78	20.74	+5.02	48	1959	+320
Winamac	91	62	74	+2	1.10	3		19.91	+4.54	57	2115	+366
North Central (2)												
Plymouth	93	59	73	-2	0.86	3		18.42	+2.34	45	1997	+172
South_Bend	91	60	74	+2	0.33	3		18.48	+3.40	49	2072	+373
Young_America	89	61	73	-2	1.72	2		24.59	+9.77	44	2080	+292
Northeast (3)												
Fort_Wayne	91	61	75	+2	0.41	2		18.28	+4.31	47	2329	+546
Kendallville	90	60	73	+1	0.62	4		17.97	+3.24	64	1996	+323
West Central (4)												
Greencastle	87	61	74	-2	0.79	1		23.61	+6.05	53	2085	+64
Perrysville	91	59	76	+3	0.11	1	85	22.84	+6.11	48	2382	+488
Spencer_Ag	89	63	77	+3	0.13	1		26.14	+8.19	52	2271	+372
Terre_Haute_AFB	90	64	77	+3	0.08	2		25.11	+8.13	57	2470	+452
W_Lafayette_6NW	91	59	75	+2	1.46	3	81	22.87	+7.48	45	2232	+444
Central (5)												
Eagle_Creek_AP	91	66	78	+4	1.22	1		22.55	+6.75	52	2505	+506
Greenfield	90	62	75	+1	0.80	2		25.72	+8.37	55	2321	+412
Indianapolis_AP	92	67	78	+4	0.80	1		20.00	+4.20	46	2574	+575
Indianapolis_SE	89	62	75	+0	0.66	1		21.50	+5.06	49	2258	+279
Tipton_Ag	90	59	73	+0	1.21	4	79	23.48	+7.90	53	2138	+404
East Central (6)												
Farmland	90	59	74	+2	1.14	2	80	20.86	+5.49	58	2180	+494
New_Castle	89	57	73	-1	0.79	4		26.37	+9.47	53	2071	+347
Southwest (7)												
Evansville	93	68	81	+4	0.46	2		12.34	-4.08	44	2845	+501
Freelandville	90	66	79	+3	0.43	3		21.51	+4.50	47	2564	+475
Shoals_8S	93	61	78	+3	1.00	2		22.95	+4.53	38	2380	+372
Stendal	92	67	81	+4	0.30	2		18.29	+0.13	39	2873	+678
Vincennes_5NE	91	66	79	+3	2.83	4	86	25.57	+8.56	52	2618	+529
South Central (8)												
Leavenworth	90	65	79	+4	0.94	5		19.83	+1.20	65	2594	+591
Oolitic	90	61	77	+3	0.01	1	87	22.45	+4.99	50	2319	+404
Tell_City	90	68	80	+3	0.00	0		18.06	-0.41	37	2758	+534
Southeast (9)												
Brookville	90	59	76	+3	0.06	1		19.22	+2.38	48	2338	+531
Greensburg	92	62	78	+5	0.78	1		20.73	+3.82	49	2532	+662
Seymour	90	59	76	+2	0.00	0		17.95	+1.05	42	2309	+382

DFN = Departure From Normal.
GDD = Growing Degree Days.
Precipitation (Rainfall or melted snow/ice) in inches.
Precipitation Days = Days with precip of .01 inch or more.
Air Temperatures in Degrees Fahrenheit.

For more weather information, visit www.awis.com
or call 1-888-798-9955.

Can Warm Nights Reduce Grain Yield in Corn?

Written by Peter Thomison, Ohio State University. Article appears in the C.O.R.N. Newsletter 2010-22.

High night temperatures (in the 70s or 80s) can result in wasteful respiration and a lower net amount of dry matter accumulation in plants. The rate of respiration of plants increases rapidly as the temperature increases, approximately doubling for each 13 degree F increase. With high night temperatures more of the sugars produced by photosynthesis during the day are lost; less is available to fill developing kernels, thereby lowering potential grain yield. High night time temperatures result in faster heat unit (GDD) accumulation that can lead to earlier corn maturation, whereas cool night temperatures result in slower GDD accumulation that can lengthen grain filling and promote greater dry matter accumulation and grain yields.

Past research at the University of Illinois indicates that corn grown at night temperatures in the mid-60s outyields corn grown at temperatures in the mid-80s. Corn yields are often higher with irrigation in western states, which have low humidity and limited rainfall. While these areas are characterized by hot sunny days, night temperatures are often cooler than in the Eastern Corn Belt. Low night temperatures during grain fill have been associated with some of Ohio's highest corn yields in past years. Last year, when the highest corn average yield to date were achieved, 174 bu/A, Ohio experienced one of its coolest Julys on record. The cool night temperatures may have reduced respiration losses during early grain fill and lengthened the rain fill period.

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